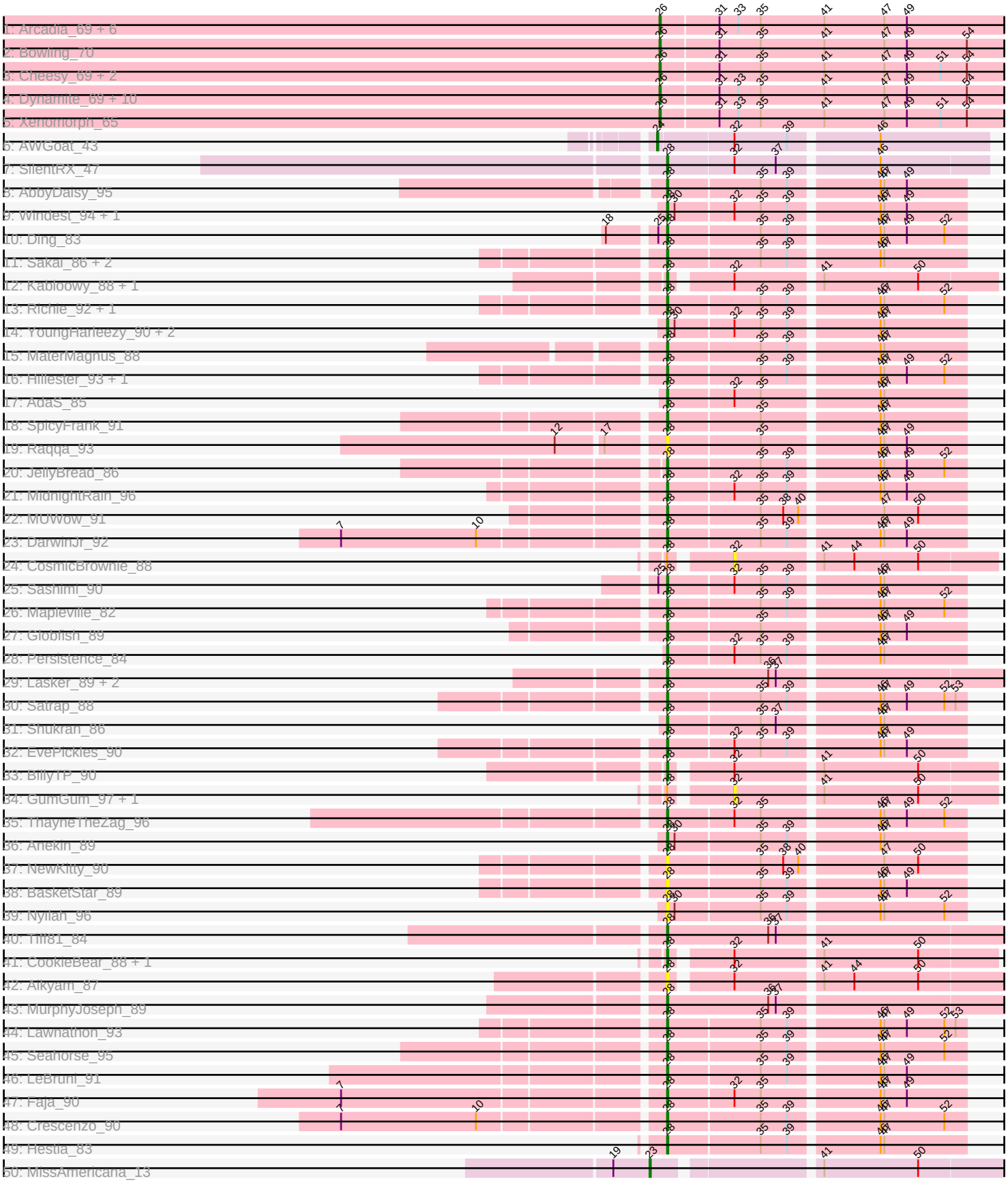
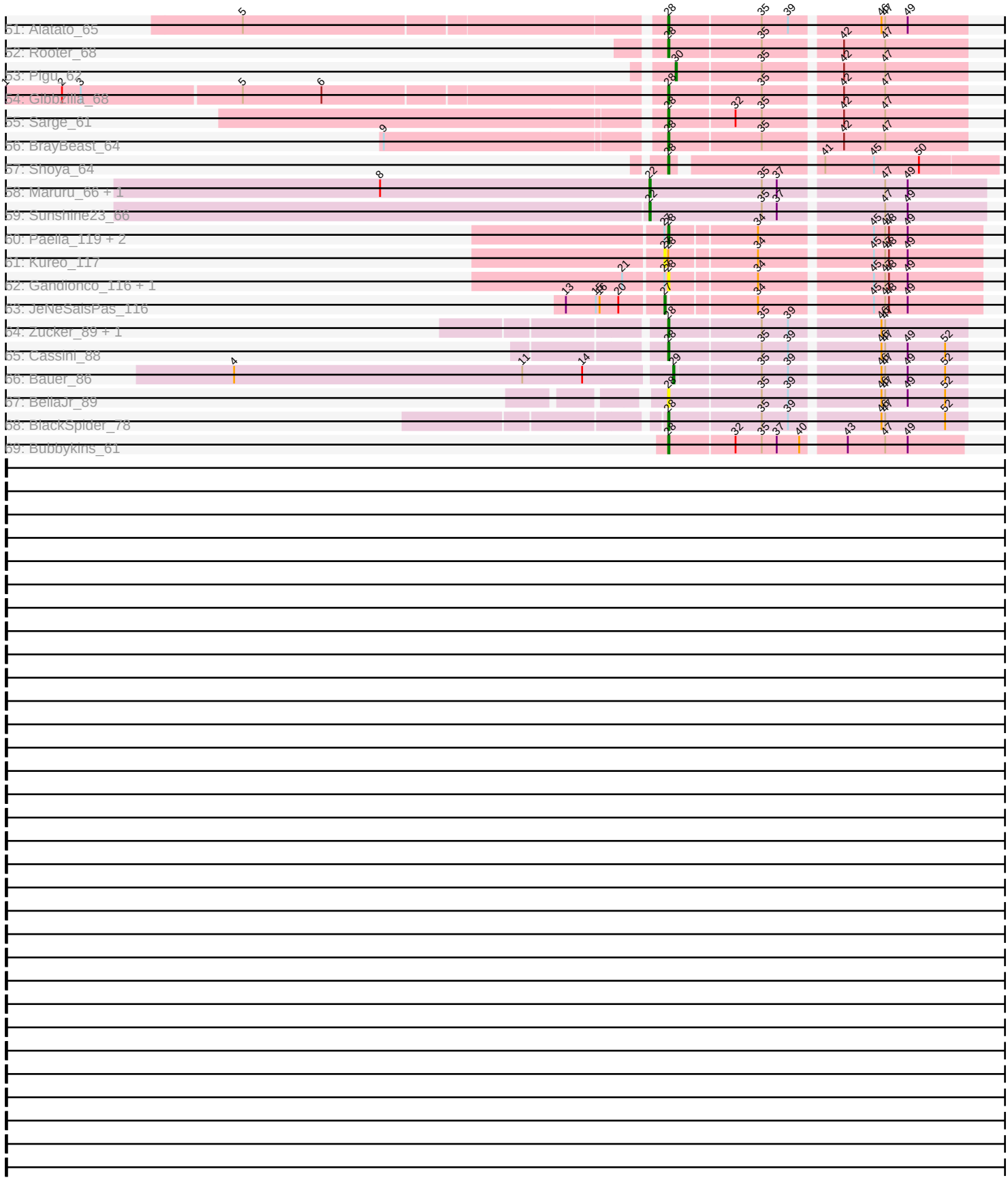
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1: Arcadia_69 + 6
2: Bowling_70
3: Cheesy_69 + 2
4: Dynamite_69 + 10
5: Xenomorph_65
6: AWGoat_43
7: SilentRX_47
8: AbbyDaisy_95
9: Windest_94 + 1
10: Ding_83
11: Sakai_86 + 2
12: Kabloowy_88 + 1
13: Richie_92 + 1
14: YoungHaneezy_90 + 2
15: MaterMagnus_88
16: Hillester_93 + 1
17: AdaS_85
18: SpicyFrank_91
19: Raqqa_93
20: JellyBread_86
21: MidnightRain_96
22: MOWow_91
23: DarwinJr_92
24: CosmicBrownie_88
25: Sashimi_90
26: Mapleville_82
27: Globfish_89
28: Persistence_84
29: Lasker_89 + 2
30: Satrap_88
31: Shukran_86
32: EvePickles_90
33: BillyTP_90
34: GumGum_97 + 1
35: ThayneTheZag_96
36: Anekin_89
37: NewKitty_90
38: BasketStar_89
39: Nylan_96
40: Tiff81_84
41: CookieBear_88 + 1
42: Alkyam_87
43: MurphyJoseph_89
44: Lawnathon_93
45: Seahorse_95
46: LeBrunt_91
47: Faja_90
48: Crescenzo_90
49: Hestia_83
50: MissAmericana_13

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51: Alatato_65
52: Rooter_68
53: Pigu_62
54: Gibbzilla_68
55: Sarge_61
56: BrayBeast_64
57: Shoya_64
58: Maruru_66 + 1
59: Sunshine23_66
60: Paella_119 + 2
61: Kureo_117
62: Gandlonco_116 + 1
63: JeNeSaisPas_116
64: Zucker_89 + 1
65: Cassini_88
66: Bauer_86
67: BellaJr_89
68: BlackSpider_78
69: Bubbykins_61

Note: Tracks are now grouped by subcluster and scaled. Switching in subcluster is indicated by changes in track color. Track scale is now set by default to display the region 30 bp upstream of start 1 to 30 bp downstream of the last possible start. If this default region is judged to be packed too tightly with annotated starts, the track will be further scaled to only show that region of the ORF with annotated starts. This action will be indicated by adding "Zoomed" to the title. For starts, yellow indicates the location of called starts comprised solely of Glimmer/GeneMark auto-annotations, green indicates the location of called starts with at least 1 manual gene annotation.

Pham 345573 Report

This analysis was run 11/14/26 on database version 672.

Pham number 345573 has 104 members, 16 are drafts.

Phages represented in each track:
• Track 1 : Arcadia_69, Kardesai_69, Nason_69, Elsa_69, Mooshroom_70, KeaneyLin_65, GoCrazy_66
• Track 2 : Bowling_70
• Track 3 : Cheesy_69, Tribby_72, Correa_67
• Track 4 : Dynamite_69, YoshiYama_70, JEGGS_68, Mudcat_65, NapoleonB_70, Heisenberger_68, Circum_70, Stardom_68, Benllo_66, BenitoAntonio_67, Hankly_68
• Track 5 : Xenomorph_65
• Track 6 : AWGoat_43
• Track 7 : SilentRX_47
• Track 8 : AbbyDaisy_95
• Track 9 : Windest_94, Isolde_90
• Track 10 : Ding_83
• Track 11 : Sakai_86, Auxilium_87, Gorpy_87
• Track 12 : Kabloowy_88, BlueShadow_87
• Track 13 : Richie_92, BenchScraper_89
• Track 14 : YoungHarleezy_90, JakeTheSnake_94, Bhageatrice_93
• Track 15 : MaterMagnus_88
• Track 16 : Hillester_93, RadFad_94
• Track 17 : AdaS_85
• Track 18 : SpicyFrank_91
• Track 19 : Raqqa_93
• Track 20 : JellyBread_86
• Track 21 : MidnightRain_96
• Track 22 : MUWow_91
• Track 23 : DarwinJr_92
• Track 24 : CosmicBrownie_88
• Track 25 : Sashimi_90
• Track 26 : Mapleville_82
• Track 27 : Globfish_89
• Track 28 : Persistence_84
• Track 29 : Lasker_89, Raphaella_89, Vopal_90
• Track 30 : Satrap_88
• Track 31 : Shukran_86
• Track 32 : EvePickles_90
• Track 33 : BillyTP_90
• Track 34 : GumGum_97, SonDevVon_97
• Track 35 : ThayneTheZag_96

• Track 36 : Anekin_89
• Track 37 : NewKitty_90
• Track 38 : BasketStar_89
• Track 39 : Nyilah_96
• Track 40 : Tiff81_84
• Track 41 : CookieBear_88, Sporco_92
• Track 42 : Aikyam_87
• Track 43 : MurphyJoseph_89
• Track 44 : Lawnathon_93
• Track 45 : Seahorse_95
• Track 46 : LeBruni_91
• Track 47 : Faja_90
• Track 48 : Crescenzo_90
• Track 49 : Hestia_83
• Track 50 : MissAmericana_13
• Track 51 : Alatato_65
• Track 52 : Rooter_68
• Track 53 : Pigu_62
• Track 54 : Gibbzilla_68
• Track 55 : Sarge_61
• Track 56 : BrayBeast_64
• Track 57 : Shoya_64
• Track 58 : Maruru_66, Sonali_66
• Track 59 : Sunshine23_66
• Track 60 : Paella_119, Qui_119, Elver_119
• Track 61 : Kureo_117
• Track 62 : Gandionco_116, Marianna39_117
• Track 63 : JeNeSaisPas_116
• Track 64 : Zucker_89, Phrank15_95
• Track 65 : Cassini_88
• Track 66 : Bauer_86
• Track 67 : BellaJr_89
• Track 68 : BlackSpider_78
• Track 69 : Bubbykins_61

Summary of Final Annotations (See graph section above for start numbers):

The start number called the most often in the published annotations is 28, it was called in 59 of the 88 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• AbbyDaisy_95, AdaS_85, Aikyam_87, Alatato_65, Anekin_89, Auxilium_87, BasketStar_89, BellaJr_89, BenchScraper_89, Bhageatrice_93, BillyTP_90, BlackSpider_78, BlueShadow_87, BrayBeast_64, Bubbykins_61, Cassini_88, CookieBear_88, Crescenzo_90, DarwinJr_92, Ding_83, Elver_119, EvePickles_90, Faja_90, Gandionco_116, Gibbzilla_68, Globfish_89, Gorpy_87, Hestia_83, Hillester_93, Isolde_90, JakeTheSnake_94, JellyBread_86, Kabloowy_88, Lasker_89, Lawnathon_93, LeBruni_91, MUWow_91, Mapleville_82, Marianna39_117, MaterMagnus_88, MidnightRain_96, MurphyJoseph_89, NewKitty_90, Nyilah_96, Paella_119, Persistence_84, Phrank15_95, Qui_119, RadFad_94, Raphaella_89,

Raqqa_93, Richie_92, Rooter_68, Sakai_86, Sarge_61, Sashimi_90, Satrap_88, Seahorse_95, Shoya_64, Shukran_86, SilentRX_47, SpicyFrank_91, Sporco_92, ThayneTheZag_96, Tiff81_84, Vopal_90, Windest_94, YoungHarleezy_90, Zucker_89,

Genes that have the "Most Annotated" start but do not call it:
• CosmicBrownie_88, GumGum_97, Kureo_117, SonDevVon_97,

Genes that do not have the "Most Annotated" start:
• AWGoat_43, Arcadia_69, Bauer_86, BenitoAntonio_67, Benllo_66, Bowling_70, Cheesy_69, Circum_70, Correa_67, Dynamite_69, Elsa_69, GoCrazy_66, Hankly_68, Heisenberger_68, JEGGS_68, JeNeSaisPas_116, Kardesai_69, KeaneyLin_65, Maruru_66, MissAmericana_13, Mooshroom_70, Mudcat_65, NapoleonB_70, Nason_69, Pigu_62, Sonali_66, Stardom_68, Sunshine23_66, Tribby_72, Xenomorph_65, YoshiYama_70,

Summary by start number:

Start 22:
• Found in 3 of 104 (2.9%) of genes in pham
• Manual Annotations of this start: 3 of 88
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Maruru_66 (FG), Sonali_66 (FG), Sunshine23_66 (FG),

Start 23:
• Found in 1 of 104 (1.0%) of genes in pham
• Manual Annotations of this start: 1 of 88
• Called 100.0% of time when present
• Phage (with cluster) where this start called: MissAmericana_13 (EM2),

Start 24:
• Found in 1 of 104 (1.0%) of genes in pham
• Manual Annotations of this start: 1 of 88
• Called 100.0% of time when present
• Phage (with cluster) where this start called: AWGoat_43 (AP4),

Start 26:
• Found in 23 of 104 (22.1%) of genes in pham
• Manual Annotations of this start: 21 of 88
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Arcadia_69 (AM), BenitoAntonio_67 (AM), Benllo_66 (AM), Bowling_70 (AM), Cheesy_69 (AM), Circum_70 (AM), Correa_67 (AM), Dynamite_69 (AM), Elsa_69 (AM), GoCrazy_66 (AM), Hankly_68 (AM), Heisenberger_68 (AM), JEGGS_68 (AM), Kardesai_69 (AM), KeaneyLin_65 (AM), Mooshroom_70 (AM), Mudcat_65 (AM), NapoleonB_70 (AM), Nason_69 (AM), Stardom_68 (AM), Tribby_72 (AM), Xenomorph_65 (AM), YoshiYama_70 (AM),

Start 27:
• Found in 7 of 104 (6.7%) of genes in pham
• Manual Annotations of this start: 1 of 88
• Called 28.6% of time when present

• Phage (with cluster) where this start called: JeNeSaisPas_116 (FK), Kureo_117 (FK),

Start 28:
• Found in 73 of 104 (70.2%) of genes in pham
• Manual Annotations of this start: 59 of 88
• Called 94.5% of time when present
• Phage (with cluster) where this start called: AbbyDaisy_95 (AY), AdaS_85 (AY), Aikyam_87 (AY), Alatato_65 (FB), Anekin_89 (AY), Auxilium_87 (AY), BasketStar_89 (AY), BellaJr_89 (FN), BenchScraper_89 (AY), Bhageatrice_93 (AY), BillyTP_90 (AY), BlackSpider_78 (FN), BlueShadow_87 (AY), BrayBeast_64 (FB), Bubbykins_61 (UNK), Cassini_88 (FN), CookieBear_88 (AY), Crescenzo_90 (AY), DarwinJr_92 (AY), Ding_83 (AY), Elver_119 (FK), EvePickles_90 (AY), Faja_90 (AY), Gandionco_116 (FK), Gibbzilla_68 (FB), Globfish_89 (AY), Gorpy_87 (AY), Hestia_83 (AY), Hillester_93 (AY), Isolde_90 (AY), JakeTheSnake_94 (AY), JellyBread_86 (AY), Kabloowy_88 (AY), Lasker_89 (AY), Lawnathon_93 (AY), LeBruni_91 (AY), MUWow_91 (AY), Mapleville_82 (AY), Marianna39_117 (FK), MaterMagnus_88 (AY), MidnightRain_96 (AY), MurphyJoseph_89 (AY), NewKitty_90 (AY), Nyilah_96 (AY), Paella_119 (FK), Persistence_84 (AY), Phrank15_95 (AY), Qui_119 (FK), RadFad_94 (AY), Raphaella_89 (AY), Raqqa_93 (AY), Richie_92 (AY), Rooter_68 (FB), Sakai_86 (AY), Sarge_61 (FB), Sashimi_90 (AY), Satrap_88 (AY), Seahorse_95 (AY), Shoya_64 (FB), Shukran_86 (AY), SilentRX_47 (AP4), SpicyFrank_91 (AY), Sporco_92 (AY), ThayneTheZag_96 (AY), Tiff81_84 (AY), Vopal_90 (AY), Windest_94 (AY), YoungHarleezy_90 (AY), Zucker_89 (FN),

Start 29:
• Found in 1 of 104 (1.0%) of genes in pham
• Manual Annotations of this start: 1 of 88
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Bauer_86 (FN),

Start 30:
• Found in 8 of 104 (7.7%) of genes in pham
• Manual Annotations of this start: 1 of 88
• Called 12.5% of time when present
• Phage (with cluster) where this start called: Pigu_62 (FB),

Start 32:
• Found in 25 of 104 (24.0%) of genes in pham
• No Manual Annotations of this start.
• Called 12.0% of time when present
• Phage (with cluster) where this start called: CosmicBrownie_88 (AY), GumGum_97 (AY), SonDevVon_97 (AY),

Summary by clusters:

There are 9 clusters represented in this pham: FK, EM2, AM, AP4, FB, FG, AY, UNK, FN,

Info for manual annotations of cluster AM:
•Start number 26 was manually annotated 21 times for cluster AM.

Info for manual annotations of cluster AP4:

•Start number 24 was manually annotated 1 time for cluster AP4.
•Start number 28 was manually annotated 1 time for cluster AP4.

Info for manual annotations of cluster AY:
•Start number 28 was manually annotated 45 times for cluster AY.

Info for manual annotations of cluster EM2:
•Start number 23 was manually annotated 1 time for cluster EM2.

Info for manual annotations of cluster FB:
•Start number 28 was manually annotated 6 times for cluster FB.
•Start number 30 was manually annotated 1 time for cluster FB.

Info for manual annotations of cluster FG:
•Start number 22 was manually annotated 3 times for cluster FG.

Info for manual annotations of cluster FK:
•Start number 27 was manually annotated 1 time for cluster FK.
•Start number 28 was manually annotated 3 times for cluster FK.

Info for manual annotations of cluster FN:
•Start number 28 was manually annotated 3 times for cluster FN.
•Start number 29 was manually annotated 1 time for cluster FN.

Info for manual annotations of cluster UNK:
•Start number 28 was manually annotated 1 time for cluster UNK.

Gene Information:

Gene: AWGoat_43 Start: 36435, Stop: 36184, Start Num: 24
Candidate Starts for AWGoat_43:
(Start: 24 @36435 has 1 MA's), (32, 36378), (39, 36336), (46, 36270),

Gene: AbbyDaisy_95 Start: 52716, Stop: 52943, Start Num: 28
Candidate Starts for AbbyDaisy_95:
(Start: 28 @52716 has 59 MA's), (35, 52788), (39, 52809), (46, 52875), (47, 52878), (49, 52896),

Gene: AdaS_85 Start: 47194, Stop: 47421, Start Num: 28
Candidate Starts for AdaS_85:
(Start: 28 @47194 has 59 MA's), (32, 47245), (35, 47266), (46, 47353), (47, 47356),

Gene: Aikyam_87 Start: 47697, Stop: 47942, Start Num: 28
Candidate Starts for Aikyam_87:
(Start: 28 @47697 has 59 MA's), (32, 47739), (41, 47802), (44, 47826), (50, 47877),

Gene: Alatato_65 Start: 36428, Stop: 36655, Start Num: 28
Candidate Starts for Alatato_65:
(5, 36107), (Start: 28 @36428 has 59 MA's), (35, 36500), (39, 36521), (46, 36587), (47, 36590), (49, 36608),

Gene: Anekin_89 Start: 49928, Stop: 50155, Start Num: 28

Candidate Starts for Anekin_89:
(Start: 28 @49928 has 59 MA's), (Start: 30 @49934 has 1 MA's), (35, 50000), (39, 50021), (46, 50087), (47, 50090),

Gene: Arcadia_69 Start: 43472, Stop: 43750, Start Num: 26
Candidate Starts for Arcadia_69:
(Start: 26 @43472 has 21 MA's), (31, 43517), (33, 43532), (35, 43550), (41, 43601), (47, 43649), (49, 43667),

Gene: Auxilium_87 Start: 46996, Stop: 47223, Start Num: 28
Candidate Starts for Auxilium_87:
(Start: 28 @46996 has 59 MA's), (35, 47068), (39, 47089), (46, 47155), (47, 47158),

Gene: BasketStar_89 Start: 49542, Stop: 49769, Start Num: 28
Candidate Starts for BasketStar_89:
(Start: 28 @49542 has 59 MA's), (35, 49614), (39, 49635), (46, 49701), (47, 49704), (49, 49722),

Gene: Bauer_86 Start: 46271, Stop: 46492, Start Num: 29
Candidate Starts for Bauer_86:
(4, 45926), (11, 46157), (14, 46205), (Start: 29 @46271 has 1 MA's), (35, 46337), (39, 46358), (46, 46424), (47, 46427), (49, 46445), (52, 46475),

Gene: BellaJr_89 Start: 49728, Stop: 49955, Start Num: 28
Candidate Starts for BellaJr_89:
(Start: 28 @49728 has 59 MA's), (35, 49800), (39, 49821), (46, 49887), (47, 49890), (49, 49908), (52, 49938),

Gene: BenchScraper_89 Start: 47947, Stop: 48174, Start Num: 28
Candidate Starts for BenchScraper_89:
(Start: 28 @47947 has 59 MA's), (35, 48019), (39, 48040), (46, 48106), (47, 48109), (52, 48157),

Gene: BenitoAntonio_67 Start: 42507, Stop: 42785, Start Num: 26
Candidate Starts for BenitoAntonio_67:
(Start: 26 @42507 has 21 MA's), (31, 42552), (33, 42567), (35, 42585), (41, 42636), (47, 42684), (49, 42702), (54, 42750),

Gene: Benllo_66 Start: 43185, Stop: 43463, Start Num: 26
Candidate Starts for Benllo_66:
(Start: 26 @43185 has 21 MA's), (31, 43230), (33, 43245), (35, 43263), (41, 43314), (47, 43362), (49, 43380), (54, 43428),

Gene: Bhageatrice_93 Start: 52222, Stop: 52449, Start Num: 28
Candidate Starts for Bhageatrice_93:
(Start: 28 @52222 has 59 MA's), (Start: 30 @52228 has 1 MA's), (32, 52273), (35, 52294), (39, 52315), (46, 52381), (47, 52384),

Gene: BillyTP_90 Start: 50050, Stop: 50289, Start Num: 28
Candidate Starts for BillyTP_90:
(Start: 28 @50050 has 59 MA's), (32, 50092), (41, 50155), (50, 50230),

Gene: BlackSpider_78 Start: 47304, Stop: 47531, Start Num: 28
Candidate Starts for BlackSpider_78:
(Start: 28 @47304 has 59 MA's), (35, 47376), (39, 47397), (46, 47463), (47, 47466), (52, 47514),

Gene: BlueShadow_87 Start: 49643, Stop: 49882, Start Num: 28
Candidate Starts for BlueShadow_87:
(Start: 28 @49643 has 59 MA's), (32, 49685), (41, 49748), (50, 49823),

Gene: Bowling_70 Start: 43461, Stop: 43739, Start Num: 26
Candidate Starts for Bowling_70:
(Start: 26 @43461 has 21 MA's), (31, 43506), (35, 43539), (41, 43590), (47, 43638), (49, 43656), (54, 43704),

Gene: BrayBeast_64 Start: 36058, Stop: 36285, Start Num: 28
Candidate Starts for BrayBeast_64:
(9, 35845), (Start: 28 @36058 has 59 MA's), (35, 36130), (42, 36187), (47, 36220),

Gene: Bubbykins_61 Start: 45574, Stop: 45798, Start Num: 28
Candidate Starts for Bubbykins_61:
(Start: 28 @45574 has 59 MA's), (32, 45625), (35, 45646), (37, 45658), (40, 45676), (43, 45706), (47, 45736), (49, 45754),

Gene: Cassini_88 Start: 49322, Stop: 49549, Start Num: 28
Candidate Starts for Cassini_88:
(Start: 28 @49322 has 59 MA's), (35, 49394), (39, 49415), (46, 49481), (47, 49484), (49, 49502), (52, 49532),

Gene: Cheesy_69 Start: 42699, Stop: 42977, Start Num: 26
Candidate Starts for Cheesy_69:
(Start: 26 @42699 has 21 MA's), (31, 42744), (35, 42777), (41, 42828), (47, 42876), (49, 42894), (51, 42921), (54, 42942),

Gene: Circum_70 Start: 43275, Stop: 43553, Start Num: 26
Candidate Starts for Circum_70:
(Start: 26 @43275 has 21 MA's), (31, 43320), (33, 43335), (35, 43353), (41, 43404), (47, 43452), (49, 43470), (54, 43518),

Gene: CookieBear_88 Start: 49258, Stop: 49497, Start Num: 28
Candidate Starts for CookieBear_88:
(Start: 28 @49258 has 59 MA's), (32, 49300), (41, 49363), (50, 49438),

Gene: Correa_67 Start: 42273, Stop: 42551, Start Num: 26
Candidate Starts for Correa_67:
(Start: 26 @42273 has 21 MA's), (31, 42318), (35, 42351), (41, 42402), (47, 42450), (49, 42468), (51, 42495), (54, 42516),

Gene: CosmicBrownie_88 Start: 48350, Stop: 48547, Start Num: 32
Candidate Starts for CosmicBrownie_88:
(Start: 28 @48308 has 59 MA's), (32, 48350), (41, 48413), (44, 48437), (50, 48488),

Gene: Crescenzo_90 Start: 50951, Stop: 51178, Start Num: 28
Candidate Starts for Crescenzo_90:
(7, 50708), (10, 50816), (Start: 28 @50951 has 59 MA's), (35, 51023), (39, 51044), (46, 51110), (47, 51113), (52, 51161),

Gene: DarwinJr_92 Start: 51065, Stop: 51292, Start Num: 28

Candidate Starts for DarwinJr_92:
(7, 50822), (10, 50930), (Start: 28 @51065 has 59 MA's), (35, 51137), (39, 51158), (46, 51224), (47, 51227), (49, 51245),

Gene: Ding_83 Start: 49479, Stop: 49706, Start Num: 28
Candidate Starts for Ding_83:
(18, 49440), (25, 49473), (Start: 28 @49479 has 59 MA's), (35, 49551), (39, 49572), (46, 49638), (47, 49641), (49, 49659), (52, 49689),

Gene: Dynamite_69 Start: 43288, Stop: 43566, Start Num: 26
Candidate Starts for Dynamite_69:
(Start: 26 @43288 has 21 MA's), (31, 43333), (33, 43348), (35, 43366), (41, 43417), (47, 43465), (49, 43483), (54, 43531),

Gene: Elsa_69 Start: 43472, Stop: 43750, Start Num: 26
Candidate Starts for Elsa_69:
(Start: 26 @43472 has 21 MA's), (31, 43517), (33, 43532), (35, 43550), (41, 43601), (47, 43649), (49, 43667),

Gene: Elver_119 Start: 65771, Stop: 66007, Start Num: 28
Candidate Starts for Elver_119:
(Start: 27 @65768 has 1 MA's), (Start: 28 @65771 has 59 MA's), (34, 65837), (45, 65921), (47, 65930), (48, 65933), (49, 65948),

Gene: EvePickles_90 Start: 50663, Stop: 50890, Start Num: 28
Candidate Starts for EvePickles_90:
(Start: 28 @50663 has 59 MA's), (32, 50714), (35, 50735), (39, 50756), (46, 50822), (47, 50825), (49, 50843),

Gene: Faja_90 Start: 49924, Stop: 50151, Start Num: 28
Candidate Starts for Faja_90:
(7, 49681), (Start: 28 @49924 has 59 MA's), (32, 49975), (35, 49996), (46, 50083), (47, 50086), (49, 50104),

Gene: Gandionco_116 Start: 64583, Stop: 64819, Start Num: 28
Candidate Starts for Gandionco_116:
(21, 64550), (Start: 27 @64580 has 1 MA's), (Start: 28 @64583 has 59 MA's), (34, 64649), (45, 64733), (47, 64742), (48, 64745), (49, 64760),

Gene: Gibbzilla_68 Start: 36826, Stop: 37053, Start Num: 28
Candidate Starts for Gibbzilla_68:
(1, 36319), (2, 36364), (3, 36379), (5, 36505), (6, 36568), (Start: 28 @36826 has 59 MA's), (35, 36898), (42, 36955), (47, 36988),

Gene: Globfish_89 Start: 48667, Stop: 48894, Start Num: 28
Candidate Starts for Globfish_89:
(Start: 28 @48667 has 59 MA's), (35, 48739), (46, 48826), (47, 48829), (49, 48847),

Gene: GoCrazy_66 Start: 42732, Stop: 43010, Start Num: 26
Candidate Starts for GoCrazy_66:
(Start: 26 @42732 has 21 MA's), (31, 42777), (33, 42792), (35, 42810), (41, 42861), (47, 42909), (49, 42927),

Gene: Gorpy_87 Start: 50675, Stop: 50902, Start Num: 28
Candidate Starts for Gorpy_87:
(Start: 28 @50675 has 59 MA's), (35, 50747), (39, 50768), (46, 50834), (47, 50837),

Gene: GumGum_97 Start: 51052, Stop: 51249, Start Num: 32
Candidate Starts for GumGum_97:
(Start: 28 @51010 has 59 MA's), (32, 51052), (41, 51115), (50, 51190),

Gene: Hankly_68 Start: 42356, Stop: 42634, Start Num: 26
Candidate Starts for Hankly_68:
(Start: 26 @42356 has 21 MA's), (31, 42401), (33, 42416), (35, 42434), (41, 42485), (47, 42533), (49, 42551), (54, 42599),

Gene: Heisenberger_68 Start: 42694, Stop: 42972, Start Num: 26
Candidate Starts for Heisenberger_68:
(Start: 26 @42694 has 21 MA's), (31, 42739), (33, 42754), (35, 42772), (41, 42823), (47, 42871), (49, 42889), (54, 42937),

Gene: Hestia_83 Start: 47282, Stop: 47509, Start Num: 28
Candidate Starts for Hestia_83:
(Start: 28 @47282 has 59 MA's), (35, 47354), (39, 47375), (46, 47441), (47, 47444),

Gene: Hillester_93 Start: 49669, Stop: 49896, Start Num: 28
Candidate Starts for Hillester_93:
(Start: 28 @49669 has 59 MA's), (35, 49741), (39, 49762), (46, 49828), (47, 49831), (49, 49849), (52, 49879),

Gene: Isolde_90 Start: 50517, Stop: 50744, Start Num: 28
Candidate Starts for Isolde_90:
(Start: 28 @50517 has 59 MA's), (Start: 30 @50523 has 1 MA's), (32, 50568), (35, 50589), (39, 50610), (46, 50676), (47, 50679), (49, 50697),

Gene: JEGGS_68 Start: 42773, Stop: 43051, Start Num: 26
Candidate Starts for JEGGS_68:
(Start: 26 @42773 has 21 MA's), (31, 42818), (33, 42833), (35, 42851), (41, 42902), (47, 42950), (49, 42968), (54, 43016),

Gene: JakeTheSnake_94 Start: 51814, Stop: 52041, Start Num: 28
Candidate Starts for JakeTheSnake_94:
(Start: 28 @51814 has 59 MA's), (Start: 30 @51820 has 1 MA's), (32, 51865), (35, 51886), (39, 51907), (46, 51973), (47, 51976),

Gene: JeNeSaisPas_116 Start: 65186, Stop: 65422, Start Num: 27
Candidate Starts for JeNeSaisPas_116:
(13, 65111), (15, 65135), (16, 65138), (20, 65153), (Start: 27 @65186 has 1 MA's), (34, 65252), (45, 65336), (47, 65345), (48, 65348), (49, 65363),

Gene: JellyBread_86 Start: 49663, Stop: 49890, Start Num: 28
Candidate Starts for JellyBread_86:
(Start: 28 @49663 has 59 MA's), (35, 49735), (39, 49756), (46, 49822), (47, 49825), (49, 49843), (52, 49873),

Gene: Kabloowy_88 Start: 49923, Stop: 50162, Start Num: 28

Candidate Starts for Kabloowy_88:
(Start: 28 @49923 has 59 MA's), (32, 49965), (41, 50028), (50, 50103),

Gene: Kardesai_69 Start: 43082, Stop: 43360, Start Num: 26
Candidate Starts for Kardesai_69:
(Start: 26 @43082 has 21 MA's), (31, 43127), (33, 43142), (35, 43160), (41, 43211), (47, 43259), (49, 43277),

Gene: KeaneyLin_65 Start: 42732, Stop: 43010, Start Num: 26
Candidate Starts for KeaneyLin_65:
(Start: 26 @42732 has 21 MA's), (31, 42777), (33, 42792), (35, 42810), (41, 42861), (47, 42909), (49, 42927),

Gene: Kureo_117 Start: 64776, Stop: 65015, Start Num: 27
Candidate Starts for Kureo_117:
(Start: 27 @64776 has 1 MA's), (Start: 28 @64779 has 59 MA's), (34, 64845), (45, 64929), (47, 64938), (48, 64941), (49, 64956),

Gene: Lasker_89 Start: 50385, Stop: 50648, Start Num: 28
Candidate Starts for Lasker_89:
(Start: 28 @50385 has 59 MA's), (36, 50466), (37, 50472),

Gene: Lawnathon_93 Start: 50019, Stop: 50246, Start Num: 28
Candidate Starts for Lawnathon_93:
(Start: 28 @50019 has 59 MA's), (35, 50091), (39, 50112), (46, 50178), (47, 50181), (49, 50199), (52, 50229), (53, 50238),

Gene: LeBruni_91 Start: 49787, Stop: 50014, Start Num: 28
Candidate Starts for LeBruni_91:
(Start: 28 @49787 has 59 MA's), (35, 49859), (39, 49880), (46, 49946), (47, 49949), (49, 49967),

Gene: MUWow_91 Start: 50713, Stop: 50940, Start Num: 28
Candidate Starts for MUWow_91:
(Start: 28 @50713 has 59 MA's), (35, 50785), (38, 50803), (40, 50815), (47, 50875), (50, 50902),

Gene: Mapleville_82 Start: 48161, Stop: 48388, Start Num: 28
Candidate Starts for Mapleville_82:
(Start: 28 @48161 has 59 MA's), (35, 48233), (39, 48254), (46, 48320), (47, 48323), (52, 48371),

Gene: Marianna39_117 Start: 65194, Stop: 65430, Start Num: 28
Candidate Starts for Marianna39_117:
(21, 65161), (Start: 27 @65191 has 1 MA's), (Start: 28 @65194 has 59 MA's), (34, 65260), (45, 65344), (47, 65353), (48, 65356), (49, 65371),

Gene: Maruru_66 Start: 45050, Stop: 45310, Start Num: 22
Candidate Starts for Maruru_66:
(8, 44834), (Start: 22 @45050 has 3 MA's), (35, 45140), (37, 45152), (47, 45230), (49, 45248),

Gene: MaterMagnus_88 Start: 49961, Stop: 50188, Start Num: 28
Candidate Starts for MaterMagnus_88:
(Start: 28 @49961 has 59 MA's), (35, 50033), (39, 50054), (46, 50120), (47, 50123),

Gene: MidnightRain_96 Start: 51168, Stop: 51395, Start Num: 28

Candidate Starts for MidnightRain_96:
(Start: 28 @51168 has 59 MA's), (32, 51219), (35, 51240), (39, 51261), (46, 51327), (47, 51330), (49, 51348),

Gene: MissAmericana_13 Start: 9042, Stop: 8782, Start Num: 23
Candidate Starts for MissAmericana_13:
(19, 9063), (Start: 23 @9042 has 1 MA's), (41, 8925), (50, 8850),

Gene: Mooshroom_70 Start: 43082, Stop: 43360, Start Num: 26
Candidate Starts for Mooshroom_70:
(Start: 26 @43082 has 21 MA's), (31, 43127), (33, 43142), (35, 43160), (41, 43211), (47, 43259), (49, 43277),

Gene: Mudcat_65 Start: 44131, Stop: 44409, Start Num: 26
Candidate Starts for Mudcat_65:
(Start: 26 @44131 has 21 MA's), (31, 44176), (33, 44191), (35, 44209), (41, 44260), (47, 44308), (49, 44326), (54, 44374),

Gene: MurphyJoseph_89 Start: 47998, Stop: 48261, Start Num: 28
Candidate Starts for MurphyJoseph_89:
(Start: 28 @47998 has 59 MA's), (36, 48079), (37, 48085),

Gene: NapoleonB_70 Start: 43288, Stop: 43566, Start Num: 26
Candidate Starts for NapoleonB_70:
(Start: 26 @43288 has 21 MA's), (31, 43333), (33, 43348), (35, 43366), (41, 43417), (47, 43465), (49, 43483), (54, 43531),

Gene: Nason_69 Start: 43472, Stop: 43750, Start Num: 26
Candidate Starts for Nason_69:
(Start: 26 @43472 has 21 MA's), (31, 43517), (33, 43532), (35, 43550), (41, 43601), (47, 43649), (49, 43667),

Gene: NewKitty_90 Start: 50156, Stop: 50383, Start Num: 28
Candidate Starts for NewKitty_90:
(Start: 28 @50156 has 59 MA's), (35, 50228), (38, 50246), (40, 50258), (47, 50318), (50, 50345),

Gene: Nyilah_96 Start: 49629, Stop: 49856, Start Num: 28
Candidate Starts for Nyilah_96:
(Start: 28 @49629 has 59 MA's), (Start: 30 @49635 has 1 MA's), (35, 49701), (39, 49722), (46, 49788), (47, 49791), (52, 49839),

Gene: Paella_119 Start: 66359, Stop: 66595, Start Num: 28
Candidate Starts for Paella_119:
(Start: 27 @66356 has 1 MA's), (Start: 28 @66359 has 59 MA's), (34, 66425), (45, 66509), (47, 66518), (48, 66521), (49, 66536),

Gene: Persistence_84 Start: 47327, Stop: 47554, Start Num: 28
Candidate Starts for Persistence_84:
(Start: 28 @47327 has 59 MA's), (32, 47378), (35, 47399), (39, 47420), (46, 47486), (47, 47489),

Gene: Phrank15_95 Start: 50347, Stop: 50574, Start Num: 28
Candidate Starts for Phrank15_95:
(Start: 28 @50347 has 59 MA's), (35, 50419), (39, 50440), (46, 50506), (47, 50509),

Gene: Pigu_62 Start: 34831, Stop: 35052, Start Num: 30
Candidate Starts for Pigu_62:
(Start: 30 @34831 has 1 MA's), (35, 34897), (42, 34954), (47, 34987),

Gene: Qui_119 Start: 66359, Stop: 66595, Start Num: 28
Candidate Starts for Qui_119:
(Start: 27 @66356 has 1 MA's), (Start: 28 @66359 has 59 MA's), (34, 66425), (45, 66509), (47, 66518), (48, 66521), (49, 66536),

Gene: RadFad_94 Start: 49669, Stop: 49896, Start Num: 28
Candidate Starts for RadFad_94:
(Start: 28 @49669 has 59 MA's), (35, 49741), (39, 49762), (46, 49828), (47, 49831), (49, 49849), (52, 49879),

Gene: Raphaella_89 Start: 48624, Stop: 48887, Start Num: 28
Candidate Starts for Raphaella_89:
(Start: 28 @48624 has 59 MA's), (36, 48705), (37, 48711),

Gene: Raqqa_93 Start: 50720, Stop: 50947, Start Num: 28
Candidate Starts for Raqqa_93:
(12, 50645), (17, 50678), (Start: 28 @50720 has 59 MA's), (35, 50792), (46, 50879), (47, 50882), (49, 50900),

Gene: Richie_92 Start: 50519, Stop: 50746, Start Num: 28
Candidate Starts for Richie_92:
(Start: 28 @50519 has 59 MA's), (35, 50591), (39, 50612), (46, 50678), (47, 50681), (52, 50729),

Gene: Rooter_68 Start: 36880, Stop: 37107, Start Num: 28
Candidate Starts for Rooter_68:
(Start: 28 @36880 has 59 MA's), (35, 36952), (42, 37009), (47, 37042),

Gene: Sakai_86 Start: 49386, Stop: 49613, Start Num: 28
Candidate Starts for Sakai_86:
(Start: 28 @49386 has 59 MA's), (35, 49458), (39, 49479), (46, 49545), (47, 49548),

Gene: Sarge_61 Start: 33816, Stop: 34043, Start Num: 28
Candidate Starts for Sarge_61:
(Start: 28 @33816 has 59 MA's), (32, 33867), (35, 33888), (42, 33945), (47, 33978),

Gene: Sashimi_90 Start: 49657, Stop: 49884, Start Num: 28
Candidate Starts for Sashimi_90:
(25, 49651), (Start: 28 @49657 has 59 MA's), (32, 49708), (35, 49729), (39, 49750), (46, 49816), (47, 49819),

Gene: Satrap_88 Start: 49096, Stop: 49323, Start Num: 28
Candidate Starts for Satrap_88:
(Start: 28 @49096 has 59 MA's), (35, 49168), (39, 49189), (46, 49255), (47, 49258), (49, 49276), (52, 49306), (53, 49315),

Gene: Seahorse_95 Start: 54032, Stop: 54259, Start Num: 28
Candidate Starts for Seahorse_95:
(Start: 28 @54032 has 59 MA's), (35, 54104), (39, 54125), (46, 54191), (47, 54194), (52, 54242),

Gene: Shoya_64 Start: 35887, Stop: 36126, Start Num: 28
Candidate Starts for Shoya_64:
(Start: 28 @35887 has 59 MA's), (41, 35992), (45, 36031), (50, 36067),

Gene: Shukran_86 Start: 47862, Stop: 48089, Start Num: 28
Candidate Starts for Shukran_86:
(Start: 28 @47862 has 59 MA's), (35, 47934), (37, 47946), (46, 48021), (47, 48024),

Gene: SilentRX_47 Start: 38442, Stop: 38200, Start Num: 28
Candidate Starts for SilentRX_47:
(Start: 28 @38442 has 59 MA's), (32, 38391), (37, 38358), (46, 38283),

Gene: SonDevVon_97 Start: 50289, Stop: 50486, Start Num: 32
Candidate Starts for SonDevVon_97:
(Start: 28 @50247 has 59 MA's), (32, 50289), (41, 50352), (50, 50427),

Gene: Sonali_66 Start: 45518, Stop: 45778, Start Num: 22
Candidate Starts for Sonali_66:
(8, 45302), (Start: 22 @45518 has 3 MA's), (35, 45608), (37, 45620), (47, 45698), (49, 45716),

Gene: SpicyFrank_91 Start: 49438, Stop: 49665, Start Num: 28
Candidate Starts for SpicyFrank_91:
(Start: 28 @49438 has 59 MA's), (35, 49510), (46, 49597), (47, 49600),

Gene: Sporco_92 Start: 51010, Stop: 51249, Start Num: 28
Candidate Starts for Sporco_92:
(Start: 28 @51010 has 59 MA's), (32, 51052), (41, 51115), (50, 51190),

Gene: Stardom_68 Start: 42069, Stop: 42347, Start Num: 26
Candidate Starts for Stardom_68:
(Start: 26 @42069 has 21 MA's), (31, 42114), (33, 42129), (35, 42147), (41, 42198), (47, 42246), (49, 42264), (54, 42312),

Gene: Sunshine23_66 Start: 45169, Stop: 45429, Start Num: 22
Candidate Starts for Sunshine23_66:
(Start: 22 @45169 has 3 MA's), (35, 45259), (37, 45271), (47, 45349), (49, 45367),

Gene: ThayneTheZag_96 Start: 51075, Stop: 51302, Start Num: 28
Candidate Starts for ThayneTheZag_96:
(Start: 28 @51075 has 59 MA's), (32, 51126), (35, 51147), (46, 51234), (47, 51237), (49, 51255), (52, 51285),

Gene: Tiff81_84 Start: 47744, Stop: 48007, Start Num: 28
Candidate Starts for Tiff81_84:
(Start: 28 @47744 has 59 MA's), (36, 47825), (37, 47831),

Gene: Tribby_72 Start: 43659, Stop: 43937, Start Num: 26
Candidate Starts for Tribby_72:
(Start: 26 @43659 has 21 MA's), (31, 43704), (35, 43737), (41, 43788), (47, 43836), (49, 43854), (51, 43881), (54, 43902),

Gene: Vopal_90 Start: 50690, Stop: 50953, Start Num: 28

Candidate Starts for Vopal_90:
(Start: 28 @50690 has 59 MA's), (36, 50771), (37, 50777),

Gene: Windest_94 Start: 48912, Stop: 49139, Start Num: 28
Candidate Starts for Windest_94:
(Start: 28 @48912 has 59 MA's), (Start: 30 @48918 has 1 MA's), (32, 48963), (35, 48984), (39, 49005), (46, 49071), (47, 49074), (49, 49092),

Gene: Xenomorph_65 Start: 43143, Stop: 43421, Start Num: 26
Candidate Starts for Xenomorph_65:
(Start: 26 @43143 has 21 MA's), (31, 43188), (33, 43203), (35, 43221), (41, 43272), (47, 43320), (49, 43338), (51, 43365), (54, 43386),

Gene: YoshiYama_70 Start: 43715, Stop: 43993, Start Num: 26
Candidate Starts for YoshiYama_70:
(Start: 26 @43715 has 21 MA's), (31, 43760), (33, 43775), (35, 43793), (41, 43844), (47, 43892), (49, 43910), (54, 43958),

Gene: YoungHarleezy_90 Start: 50145, Stop: 50372, Start Num: 28
Candidate Starts for YoungHarleezy_90:
(Start: 28 @50145 has 59 MA's), (Start: 30 @50151 has 1 MA's), (32, 50196), (35, 50217), (39, 50238), (46, 50304), (47, 50307),

Gene: Zucker_89 Start: 50629, Stop: 50856, Start Num: 28
Candidate Starts for Zucker_89:
(Start: 28 @50629 has 59 MA's), (35, 50701), (39, 50722), (46, 50788), (47, 50791),